

DUAL CURE COATING COMPOSITION AND PROCESSES FOR USING THE SAME

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ABSTRACT

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The dual cure coating composition requires electromagnetic radiation and heat energy to cure and comprises a radiation curable component (a1), a thermally curable binder component (a2), and a thermally curable crosslinking component (a3). Radiation curable component (a1) is polymerizable upon exposure to electromagnetic radiation and comprises at least two functional groups (a11) comprising at least one bond activatable with electromagnetic radiation. Thermally curable binder component (a2) is polymerizable upon exposure to heat and comprises (a21) at least two functional groups which are reactive with functional groups (a31) and no more than 5% by weight of aromatic ring moieties (a22), based on the nonvolatile weight of thermally curable binder component (a2). Third component (a3) comprises at least 2.0 isocyanate groups per molecule. The invention further comprises methods of making coated surfaces having both optimum porosity sealing and adhesion.

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